

DEPOSITING A PINNED LAYER STRUCTURE IN A SELF-PINNED SPIN VALVE

ABSTRACT OF THE DISCLOSURE

[0046] The pinned layer structure in a self-pinned spin valve is deposited using a DC aligning field. The deposition of each of the Reference and Keeper layer in the pinned layer occurs within two different polarity DC aligning fields. Thus, a first portion of the Reference layer is deposited with a DC alignment field of a first polarity, i.e., either positive or negative, and a second portion of the Reference layer is deposited in a DC alignment field of opposite polarity. The Keeper layer is similarly deposited, with a first portion of the Keeper layer deposited in a first polarity DC alignment field and the second portion deposited in the opposite polarity DC alignment field. By splitting the deposition of the Reference and Keeper layers into portions using DC aligning fields the pinned layer structure is highly repeatable while providing a good thickness uniformity of the structure.